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ABSTRACT

This report describes the development of the Brooklyn (New York) College Learning Center (BCLC), which provides direct academic support services to students, staff development services, and new technologies for instruction and support services. The report used information available from institutional databases and information from research efforts initiated by BCLC staff. The BCLC was developed to link various academic intervention and retention strategies and to improve their effectiveness and impact. The BCLC's new facility opened in 1994 with all services, staff, and equipment in place. Program evaluation found that nearly 5,000 students had visited the facility over 3 years logging a total of 33,450 visits, and accruing a total of 47,250 hours. The evaluation study found that students who used the BCLC persisted in school longer than those who did not. Despite the fact that BCLC users were generally less well prepared for college level work than non-users, after 3 years enrollment, BCLC users completed their minimum proficiency requirements at rates higher than non-users. (JB)

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ED 378 852

Evaluation of The Brooklyn College Learning Center (BCLC)

A Title III Strengthening Institutions Project Funded By The U. S. Department of Education

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FINAL EVALUATION

U. S. Department of Education
Strengthening Institutions Program

Establishing the Brooklyn College Learning Center
to
Increase Student Retention, Promote Faculty Development, Improve Institutional Research, Student Data Systems and Computer Services

October 1, 1990 - January 31, 1994

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EXECUTIVE SUMMARY

- The BCLC was visited by more than 5000 students during the period under study. These individuals made 33,450 visits to the facility, which accrued to a total of 47,250 hours engaged in the academic support and enrichment services the facility affords them.

- On average, each student user of the BCLC engaged the services of the facility 6.3 times during the period under study. Usage patterns were highly skewed with the majority of students using the facility only a few times while a smaller proportion did so frequently.

- Facility users visited the Peer Tutoring Center much more often than the Writing Center. The Peer Tutoring Center accounted for 73 percent of all visits while the Writing Center accounted for 27 percent.

- BCLC users are retained at higher rates than non-users. Differences in the probability of retention are most pronounced after two semesters with BCLC users retained at a rate that is 25% higher than non-users.

- BCLC users surpassed the 12 credit milestone (transition to upper Freshman status) more quickly than their non-user counterparts.

- Students who do not use the BCLC complete their CORE curriculum requirements at lower rates than those who do use the facility.

- Users attempt more credits, earn more credits, and achieve a ratio of successful credit completion that is consistently higher than the non-users. Moreover, BCLC users do so at a generally higher level of academic performance, as measured by grade point index, than non-users.

- After three years (6 semesters) BCLC users passed the writing and mathematics proficiency tests at higher rates than non-users and achieved a pass rate that is nearly equivalent in the reading area.

- Based on surveys completed by faculty, students and BCLC staff alike, the facility received high marks for the quality of staff and the services offered. The facility was found to be a place where academic peers can foster a sense of community and work together for success at the academic task.

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INTRODUCTION

In 1990, Brooklyn College was awarded a Title III Grant by the United States Department of Education to support the creation of a new state-of-the-art Learning Center which would provide academic support services and enrichment to the entire campus community. Since that time, the Brooklyn College Learning Center (BCLC) has evolved to a point where it is central to the college's vision of itself as developing "creative ways of organizing academic inquiry in response to the new world realities." The new center, now integrated into the fabric of the college, serves as a forum for campus debate on such issues as literacy and language, testing and retention, the mainstreaming of non-traditional students, reading and writing across the curriculum, and integrating technology into the curriculum.

The report which follows will provide a summary evaluation of the Brooklyn College Learning Center three years following initial funding. As such the report is designed to accomplish two things. On the one hand, the report will provide a history of the Learning Center initiative, including internal and external factors that were relevant to its subsequent development. It will document progress made in the creation of the new Learning Center facility, staffing, hardware and software acquisitions and improvements, as well as computer information and communications systems support.

On the other hand, the report will systematically document the extent to which the BCLC has been utilized during the funding period, and, more importantly, it will attempt to establish how effectively the Learning Center has achieved its mission. This will be accomplished by exploiting information available from institutional databases (whose creation were part and parcel of these grant supported activities) and custom research efforts undertaken by the Learning Center staff during the past three years.

THE INSTITUTIONAL CONTEXT

The Brooklyn College Learning Center was planned as a permanent expression of the College's commitment to enhancing the success of its students. It was designed to enable students to master the transition to college and succeed both in Brooklyn's required Core Curriculum and in advanced academic programs. It was particularly concerned with those freshman students, about a third of the entering class, who were not able to pass required skills assessment tests and became mired in remedial work. It addressed these students' lack of academic preparation, their difficulties in adjusting to college, and their frustrations in failing to reach their potential.

The BCLC was created to deal with a number of problems that could not be solved by the institutional strategies and level of support then in place:

1) Considerable numbers of students failed to achieve upper freshman status (defined as having earned 12 credits).

2) At risk students in basic skills programs were slow to be integrated into the mainstream college curriculum.

3) Unacceptably high numbers of students failed the writing skills assessment tests and were obliged to repeat composition courses.

4) Inadequate data systems impeded planning for student success.

5)Technology-based activities were failing to keep up with developments.

6) Major initiatives in curriculum and faculty development were failing for lack of funding.

The Brooklyn College Learning Center

The College Learning Center was planned as a way of linking Brooklyn's various academic intervention and retention strategies to improve their effectiveness and impact. Once it was fully operational, the Learning Center was to serve Brooklyn College students as a source of practical assistance in dealing with coursework through increased knowledge, skill and confidence; as the setting for the work of a "community of learners," a group of peers who were to provide mutual support for negotiating the complexities of a large public urban institution; as a comfortable place for effective study, something many students, especially the disadvantaged students, did not have available to them; as a chance to meet useful role models in the peer tutors, many of whom are minority students.

The BCLC project was to address these issues in a number of ways:

1) Centralized Campus Facility

The construction of a new campus facility to join and strengthen existing academic support services by providing a centralized location, strong leadership, programmatic coherence, intensive faculty development and modern technology

2) Data Systems

The development of data systems to permit Brooklyn to take full advantage of the BCLC by identifying the skills problems, needs and academic progress of freshmen who are at risk and can be helped.

3) Faculty Development

The genesis of new faculty development programs that would improve remedial and core programs through the BCLC.

4) New C.I.S. Technologies

The acquisition of new computer-based technologies needed for tomorrow's instruction and support services.

Construction Postponed until 1993-94

Construction of the BCLC was to have been completed in 1990-91. To this end a site for the facility was identified and a

large donor grant of $200,000 was used to engage an architectural firm to prepare drawings and construction documents. Concurrently, the Office of Institutional Advancement drew up plans for identifying additional sources of funding. At that point, however, several unfortunate circumstances made raising the balance of the funds needed for renovation extremely difficult.

In 1990-92 the state imposed a series of drastic cuts in the City University of New York's operating budget. A direct and immediate result of these unanticipated problems in the college's tax levy budget was the disruption of a carefully planned and timed implementation of construction and hiring for the Learning center, which was based on a coordinated strategy of outside fund-raising and internal budget support. The onset of the Persian Gulf War at precisely this time coincided with the announcement by the government that the economy was in a recession. The nation's immediate reaction to these events was caution, a reaction which was shared by Brooklyn's targeted list of potential major donors. Finally, the prolonged illness and eventual death of Brooklyn's president and major fund raiser, Robert L. Hess, made raising money for BCLC construction and renovation at that time all but impossible.

THE DEVELOPMENT OF THE BCLC

Despite these difficulties, the college persisted in making construction of the BCLC an institutional priority. In 1993

Brooklyn's new president, Vernon Lattin, was able to raise funding through the City University of New York's capital budget and private contributions. Since architectural specifications had been completed years earlier, construction was begun almost immediately and took place through the fall and spring of the 1993-94 academic year. At this time, the new facility is completed and fully operational.

The new Learning Center, located in one of the most visible and accessible spaces on campus, stands as a permanent expression to the college's commitment to enhancing the success of its students. On a campus where new facilities are rare and professionally designed facilities even rarer, the BCLC is of great interest to everyone at the college. Taking up about 3,000 square feet of space, the Learning Center brings together facilities formerly located on other parts of the campus.

The Writing Center

Begun in the 1970's as a response to open enrollment, the Brooklyn College Writing Center has a national reputation for its pioneer work in the use of peer tutoring as an adjunct to the teaching of writing. Despite its reputation, however, before Title III funding began the Writing Center was located in small quarters in New Ingersoll Extension. The college did provide support in the form of a full-time director, hired in 1985, and through its provision of a tutoring budget through tax levy funds. However, in 1990 the Writing Center had no access to computers or other forms

of modern technology and was unconnected to other support services on campus. Also, the request for tutors to help students with writing assignments across the curriculum far outstripped the supply.

The Peer Tutoring Project

Begun in 1985 as a support for the college's new core curriculum, the Peer Tutoring Center also served as a model for similar programs. Originally located in a series of temporary spaces, the Peer Tutoring Project finally settled into a location in James Hall, sharing a facility with the Department of Education computer laboratory. As with the Writing Center, the college supported the Peer Tutoring Project with tax levy funding. However, it was unconnected to other support services on campus and could not meet the extensive demand for tutors for core courses.

Immersion and Prefreshman Programs

Administered through the Dean's office, these are intersession and summer programs that help at-risk students pass developmental courses and the required City University skills tests. The Immersion and Prefreshman Programs make extensive use of peer tutoring and innovative classroom methods.

1990-93 Title III funding made possible the integration of the Writing Center, the Peer Tutoring Project and the Prefreshman Programs. First, an Associate Dean of Undergraduate Studies and then the Director of the Learning Center drew together and

enlarged the college's primary support programs so that students, and especially freshman students, could be provided with the overall help they needed to succeed in their college courses. Also under Title III, computers and other forms of technological assistance were provided for the use of students and to further link the programs in their separate spaces.

With the advent of the new facility, all these and a number of other new programs developed under Title III have physically moved to a shared space. The renovated BCLC is located in Boylan Hall, which also houses Brooklyn's President, its Provost, and its Deans of Undergraduate and Graduate Studies. The BCLC is situated in a former lecture hall that faces the front entrance of the building. A sloping floor has been leveled and the space divided into large rooms and offices. The primary rooms are inhabited by the Writing Center, the Peer Tutoring Center and a large new Macintosh computer laboratory. All appointments and furniture and much of the equipment has been selected and designed for this facility. In constructing the BCLC, the college has invested approximately $1,000,000 in non-federal funding in renovation, furniture and equipment.

Administration and Staffing of the BCLC

In the pre-grant period, Brooklyn's student support services had unrelated administrative systems. The Writing Center was led by a director and several master tutors; the Peer Tutoring Project was administrated through the office of the dean of undergraduate

studies with an on-site coordinator, the prefreshman programs were again administered through the office of the dean of undergraduate studies. With the advent of Title III funding, all support programs were drawn together under the direction of Provost Christoph M. Kimmich, who headed the Title III team appointed to implement the grant: In charge of Activity 1 was the Associate Dean of Academic Studies and upon her departure, the Director of the Learning Center; in charge of Activity 2 was the Assistant Vice President of Information Technology and Systems.

The Director of the Learning Center assumed overall responsibility for the Writing Center and the Peer Tutoring Project and became the curriculum coordinator of the Prefreshman Summer Programs. Under her leadership and with Title III support, new coordinators for both the writing and peer tutoring programs were hired and new master tutors and peer tutors joined with the pre-grant staff to begin a series of projects to integrate the two centers and develop programs. New hardware and software were integrated into these programs for the use of faculty and students and new data structures (including a tracking system) were developed with the aid of a Title III funded programmer analyst and a computer consultant. New secretarial staff and a Title III administrative assistant helped to organize the day-to-day operations of the BCLC. In addition to the staffs funded by the college and by Title III, projects funded by the Ford Foundation, the Mellon Foundation, the Howard Hughes Foundation, and the City University of New York provided additional peer tutors to the

BCLC.

To ensure that the BCLC's programs were effective and influential, the Provost appointed four faculty committees to plan and oversee crucial aspects of the program: a) The Title III Advisory Committee developed the initial guidelines and monitored the plan's implementation b) The Learning Center Resource Committee developed innovative tutoring and faculty development projects and helped integrate the BCLC into the college c) The Title III Institutional Research Committee determined how best to use the data structures developed for the BCLC d) The Learning Center Evaluation Committee oversaw the project's formal evaluation. In all, thirty-five faculty members and a number of peer tutors served on these committees in order to ensure that Title III programs had a lasting impact on the institution.

In the post-grant period, the basic administrative staff set up during funding will continue to serve the college community along with the Learning Center Resource Committee and the Learning Center Evaluation Committee. These faculty and staff will ensure that the transfer to the new facility goes smoothly, and that BCLC will continue to innovate and expand as it has during the past four years.

BCLC Hardware and Software

A major aim of the Title III grant was to improve the college's computer support capabilities through additional

equipment and software. For student users of the BCLC 15 Macintosh and 11 IBM computers have been added to the 15 Macintosh computers that were previously available. Upgraded and new software was provided for all the computers. Two dedicated IBM file servers made the college's software available to students who didn't have access to it before in the learning-tutoring environment. An Apple Talk network connected the BCLC's Macintosh computers through a dedicated server. A Macintosh llci, a Macintosh llsi and an IBM PS/s aided students and faculty undertaking multi-media projects. Two Xerox copiers (one provided by Title III and the other by the college) aid in the day to day training and peer tutoring that takes place in the BCLC.

Another USDED initiative which aided the college as a whole was the development of a tracking system for the entire student population to provide transcript and overall performance information. This information, not generally available before the Title III project, has thus far been used to support advisory programs and freshman programs for incoming first-year and transfer students. Department chairs have also been using the new data for studies related to majors. These student information data were integrated with the BCLC utilization data so that a complete picture of a student's academic performance was available and continues to be available during advisement and counseling sessions. An IBM Model 80 computer, until now located in the office of the Dean of Undergraduate Studies, is dedicated to storing and processing these data.

The Title III Institutional Research Committee (described above) has recommended that the student information systems developed for the USDED project be upkept for standard college use. The college is also now adopting a mainframe student information and data management system (SIMS) based on City University-wide standards. The Title III student information system will form the model for the customized SIMS output functions dealing with student advisement and institutional research.

All Title III equipment and equipment provided by the college has been moved to the renovated Learning Center in Boylan Hall. The college has also provided additional Macintosh computers, laser printers and projection equipment for the computer laboratory in the new BCLC facility. This technology makes possible the continuation of projects and a number of new projects involved with tutoring, with training in word processing and with computer assisted instruction for courses across the curriculum.

BCLC Student Activities

In the pre-grant period the Writing Center and the Peer Tutoring Center and the Prefreshman programs provided tutoring services to the Brooklyn College Student body. During Title III funding these services were integrated, enriched and considerably expanded. Peer tutors from all the programs joined together to share and develop their enterprises. Training programs were

redesigned and expanded. Considerable effort was devoted to meeting with faculty and planning how the new BCLC could best serve the Brooklyn community.

Tutoring in writing across the curriculum and the first tier of the core was rethought and reenergized. Tutoring in non-core science courses was funded by the Howard Hughes Foundation Program in the Biological Sciences. Tutoring for ESL students was expanded by the CUNY-funded Freshman Year Initiative. Intersession and summer programs that were part of the Prefreshman Initiative provided tutors to classroom teachers in reading, writing, art, mathematics, computer science and physics.

In addition, Title III provided the resources for a number of important special projects, many of which were initiated by the Learning Center Resource Committee, described above.

The English Composition Computer Project : Provided training in word processing to 300 students in twelve freshman composition sections as a way of testing whether it was practical and desirable to train all freshmen. The project was hailed as a success by students and faculty alike, and the college's Freshman Year Committee is now planning to institutionalize it.

Tutoring Beyond the Core: Investigated whether tutoring would be beneficial to students in upper-level courses. The most

successful outcomes occurred in the sciences and the social sciences.

Freshman Outreach: Provided mentoring for 200 entering freshmen by BCLC tutors. The Freshman Outreach project had considerable impact on selected students but overall was not deemed a success. Since much mentoring already goes on in the tutoring situation, the BCLC will explore ways to expand such efforts during regular tutoring sessions.

E-mail based English Composition: Enabled several composition instructors to communicate with students through e-mail. The instructors will continue to use the technology that has been set up for them, and the English Department is now discussing enlarging its e-mail capabilities.

Training for the CUNY Writing Assessment Test: Helped students in ESL and remedial classes pass the CUNY Writing Assessment Test. Most successful was the Immersion model in which several tutors were assigned to work directly with faculty members. On the average, 60%-75% of these students passed the test (compared to 40% in classes without tutors).

BCLC Faculty Programs

A number of important faculty development projects were also supported by Title III in the grant period. These projects were designed and facilitated by the Learning Center Resource

committee, described above:

The Summer Core Faculty Development Seminar: Brings sixty Brooklyn faculty members together for several days every summer to discuss the core curriculum. This past summer, the seminar focused on the Learning Center, encouraging faculty to collaborate in developing suggestions to strengthen learning at the college.

The Wolfe Institute Collaborative Learning Demonstration: Brooklyn's Wolfe Institute for the Humanities co- sponsored a Collaborative Learning Workshop by the college's Professor Kenneth Bruffee, a noted authority in the field. The twenty-five participants continue to discuss how to inspire faculty to form students into a community of learners in their classrooms. The college recently sponsored a second demonstration and the modern languages department organized a similar workshop for its own faculty.

Reinventing the Core Physics Lab: A workshop for twenty scientists to discuss redefining the goals of the laboratory component of the science cores. As a result of the success of this seminar, the college held a full-day seminar for forty-five faculty from all disciplines in "Quantitative Reasoning Across the Curriculum." In addition, Brooklyn is applying to the National Science Foundation seeking funds for a mathematics across the curriculum project.

Writing in the Disciplines: Fifteen faculty from across the disciplines have been meeting with outside consultants since fall 1992 to discuss how to make writing a central concern at the college.

TLC:The Learning Center Journal: An ongoing journal with articles by Brooklyn faculty and tutors on teaching and learning at Brooklyn College. The first issue contained articles on collaborative learning, peer tutoring, and curriculum in core courses.

EVALUATION OF BCLC EFFECTIVENESS

Data Sources

Strengthening the Institutional Research capabilities of The College was a primary goal of the Strengthening Institutions Program. Toward that end, necessary equipment acquisitions were made and extensive programming efforts were dedicated to improving Brooklyn College's data systems and computer support capabilities. The net result of efforts in this area has been the creation of a college-wide student information system which may be used to track students from recruitment and admissions through testing, financial aid, registration, bursaring, declared major/academic advisement, student records/transcript, to the alumni system. Although not fully operational, the integrated student data base (SDB) has developed sufficiently to provide extensive data for purposes of BCLC evaluation.

In addition to the SDB, a separate BCLC Database (BCLC/DB) was developed which is loaded with relevant demographic data organized by semester cohort. The BCLC/DB logs all uses of The Learning Center by type of referral, type of use, frequency and duration of use, etc. When combined with the college-wide student data base, the BCLC database information provides the evaluation information necessary for a thorough and efficient evaluation of the Brooklyn College Learning Center. Data were obtained from these two sources for use in the evaluation that follows.

Indicators of Success

The following information was compiled to determine the success of the Brooklyn College Learning Center:

BCLC Utilization

- Number of students serviced;
- Numbers of visits;
- Duration of use by visits and students serviced;
- Utilization data are reported by type of use, activity, and referral.

Academic Outcomes

Retention:

1. movement from lower to upper freshman;
2. after 1 year and 3 years;
3. completion of "CORE" curriculum;

Basic Skill Acquisition (Proficiency):

4. time to complete remedial coursework;
5. pass rates on the CUNY Basic Skills test battery;

Academic Performance Measures

6. ratio of credits attempted to successfully completed;
7. grade point index;
8. graduation rates (after 100% of normal time to degree).

Affective Indicators

9. attitudes and perceptions of student users and non-users;
10. attitudes of faculty;
11. attitudes of staff (BCLC Tutors).

Utilization data are available for three semesters commencing with the Spring of 1992 and ending with the Spring of 1993. Outcomes data are based on the performance of three cohorts of freshmen entering Brooklyn College; these being the Fall 1990, the Fall 1991, and the Fall 1992 cohorts.

Subjects

Three cohorts of entering freshmen students numbering 1,562, 1,523 and 1,378 for fall 1990, fall 1991 and fall 1992 respectively comprise the population of students (N = 4,463) whose outcomes inform this evaluation. Use or non-use of the BCLC constitutes the treatment, that is, the basis for comparison, for the evaluation. Rates of BCLC use are more or less comparable among all three cohorts with nearly 50 percent of the students in each one reporting that they used the BCLC at least one time since entering The College. BCLC usage was lowest for the Fall 1990 cohort at 49.2 percent of students using the facility and highest among the fall 1991 group with a 51.7 percent rate of BCLC use. Overall, 49.9 percent of selected students had used the BCLC at least one time.

Characteristics of Cohorts

The information provided in Table 1 indicates that each of the three freshmen cohorts are quite similar with regard to demographic characteristics, their levels of ability and preparedness for college-level work, and their access to special support programs offered by the college. The vast majority of students are regularly admitted freshmen who constitute between 81 percent and 84 percent of the entering freshmen groups. As noted earlier, and confirmed by Table 1, nearly 50 percent of all groups utilized the BCLC while in attendance at the College. The Table also confirms that a relatively small proportion of students in each of the cohorts, close to 15 percent, had the benefit of academic support through the Pre-freshman Summer Program (PFSP).

The demographic profile of students included in Table 1 shows that the cohorts under study are also quite similar with regard to demographic characteristics such as ethnicity, age and sex. The ethnic composition of entering groups has remained fairly stable over the past three years with very minor shifts in the proportions of minority students as compared to white students. The demographic profile also reveals that females comprise more than one-half of all three cohort groups accounting for between 55 and 57 percent of all entering freshmen. Additionally, all three cohorts tend to be young, as indicated by the 18.7 year average age.

- TABLE 1 -

CHARACTERISTICS OF THREE COHORTS OF ENTERING FRESHMEN

	COHORT GROUP		
	Fall 1990	Fall 1991	Fall 1992
Institutional Characteristics			
Number of Students -	1,562	1,523	1,378
BCLC Use -			
Percent Who Used:	49.2%	51.7%	49.3%
Type of Admission -			
Regular:	84.5%	81.2%	80.8%
Seek:	15.5	18.8	19.2
Pre-freshman Program -			
% Participating:	15.6%	14.8%	15.3%
Demographic Characteristics			
Average Age At Entry -	18.7	18.7	18.6
Minority Status -			
Minority:	41.9%	41.2%	41.9%
White:	55.0	55.1	54.1
Chose "Other":	3.1	3.7	4.0
Sex -			
Female:	56.4%	57.5%	55.4%
Male:	43.6	42.5	44.6
Preparation for College Level Work			
High School Average -	81.4	80.9	81.8
English Language Proficiency -			
% ESL:	22.0%	23.2%	20.4%
Basic Academic Skills Proficiency -			
% Above Minimum....			
Mathematics:	80.2%	78.1%	78.2%
Reading:	56.3	57.2	62.4
Writing:	50.3	48.3	53.3

Lastly, students in all three cohorts were comparable with regard to their level of preparedness for college level work. The grade point indices provided in the profile confirm an above average level of high school preparation for all three cohorts. Each of the three exceeds the "B" grade, which typically corresponds to a grade point average of 80 based on a 100 point scale. The data also show that English was not the primary language spoken by a proportion of slightly greater than one-fifth of the students in each cohort. According to initial placement test data, preparedness in the basic academic skills was also comparable among the three cohorts upon entry. The data reveal that students in all three cohorts were more or less evenly split on writing ability with approximately 50 percent of students exceeding the minimum proficiency standard in all three groups. Initial pass rates in the reading component of the basic skills battery were appreciably higher than those for writing. According to the proficiency test summary provided in the table, nearly six out of ten students in all three cohorts passed the minimum proficiency level in reading. Initial math skill proficiency levels were highest with nearly eight out of ten students in all three cohorts exceeding the minimum proficiency standard.

BCLC Users vs. Non-Users

Given the documented similarities among the cohorts with regard to levels of academic preparedness, individual characteristics, and

institutional characteristics, the three entering freshmen cohorts were collapsed into two comparison groups for the purposes of outcomes analysis: BCLC Users and BCLC Non-users. Differences between the user and non-user groups are summarized in Table 2. A slightly higher proportion of the users are regularly admitted students (85 percent) as compared to non-users where regularly admitted students comprise 80 percent of the group. Females are more heavily represented among the user group at 61 percent as opposed to 52 percent of the non-user group. Less than one-half of the users, 47 percent, are minority students and one-fifth, 21 percent, are identified as ESL students. A comparable proportion of non-users are classified as ESL, 23 percent, and even fewer, slightly more than one-third, 36 percent, classify themselves as minority.

Overall, the users appear to be less well prepared for college level academic work than the non-users. According to the initial proficiency test data contained in Table 2, non-users of the BCLC facility passed all three of the basic skills proficiency tests in math, reading and writing at higher rates than the comparison group of BCLC users. Seventy-seven percent of the users passed the math proficiency test on the initial trial, while 81 percent of the non-users did so. Sixty three percent of non-users passed the initial reading proficiency test, surpassing the 54 percent pass rate of the users. The same trend holds for writing proficiency with non-users passing at a rate of 55 percent as opposed to the 46 percent pass rate of the users. High school

- TABLE 2 -

CHARACTERISTICS OF BCLC USERS AND NON-USERS

	BCLC USER STATUS	
	BCLC Users	BCLC Non-users
Institutional Characteristics		
Number of Students -	2,235	2,228
Type of Admission -		
Regular:	84.7%	79.8%
Seek:	15.3	20.2
Pre-freshman Program -		
% Participating:	30.0%	0.0%
Demographic Characteristics		
Average Age At Entry -	18.8	18.8
Minority Status -		
Minority:	47.2%	36.0%
White:	48.9	60.7
Chose "Other":	3.9	3.2
Sex -		
Female:	60.9%	52.1%
Male:	39.1	47.9
Preparation for College Level Work		
High School Average -	81.3	80.9
English Language Proficiency -		
% ESL:	21.1%	22.8%
Basic Academic Skills Proficiency -		
% Above Minimum....		
Mathematics:	77.2%	80.5%
Reading:	54.0	62.9
Writing:	45.9	55.3

admit averages of users and non-users were very comparable with the users earning an average slightly higher, 81.3 than the non-users 80.9.

Mindful of these similarities then, three entering freshmen cohorts comprise the user and non-user groups. At the time these data were collected, the initial cohort of fall 1990 freshmen would have had an opportunity to attend the college for a period of six semesters, while the subsequent cohorts, fall 1991 and fall 1992 will have done so for four semesters and two semesters respectively. Outcomes data are reported comparing the user and non-user groups after one term of enrollment and after two terms of enrollment. All three cohorts will be included in this time-frame, which include the critical transition from lower to upper freshman. Reporting after two years will be restricted to the Fall 1990 and the fall 1991 cohort. Finally, outcomes after three years is confined to the fall 1990 cohort.

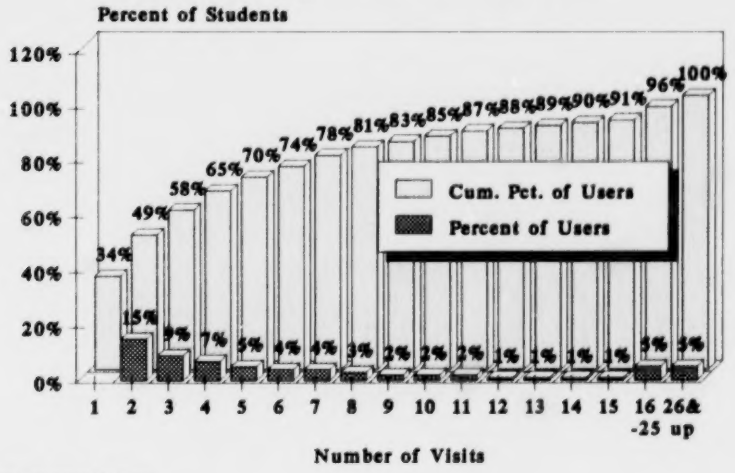
UTILIZATION OF THE BCLC

Data collected by means of the log-in systems instituted by the BCLC Writing and Peer Tutoring Centers indicate that the BCLC was used extensively by students at The College. For the purpose of this evaluation research, usage of the BCLC by Brooklyn College students was tracked for a period of three semesters, commencing with the Spring of 1992 and ending with the Spring of 1993. The frequency of visits was, for the most part, equally distributed over the three semesters under consideration with the spring of 1992 logging 32 percent of all visits and the fall of 1992 and the spring of 1993 accounting for 35 percent and 33 percent respectively. During this period of time, the BCLC was visited a total of 33,450 times by 5,186 student users.

On average, each student user of the BCLC engaged the services of the facility 6.3 times during the period in question. It should be noted, however, that distribution patterns are skewed in such a way that the majority of students utilized the facility only a few times during this period while a small proportion of students used it very often. The analysis of utilization patterns depicted in Figure 1, shows that more than one-third of all users visited the BCLC only once and nearly one-half did so only once or twice.

Figure 1

Frequency of Visits to the BCLC



N=5,213 Student Users
Source: BCLC Database System

BCLC Services Utilized

BCLC use patterns indicate a marked preference among Brooklyn College students for the Peer Tutoring Center BCLC/PT. The data in Figure 2 indicate that facility users were nearly three times more likely to visit the Peer Tutoring Center, which accounted for 73 percent of all visits, as compared to the Writing Center (BCLC/WC) which logged 27% of all visits. In all, 2073 individuals, representing one out of every four facility users (40%), visited the Writing Center at least one time during this period. Meanwhile 4,057 students, representing more than three out of four BCLC users (78%), used the Peer Tutoring Center at least once.

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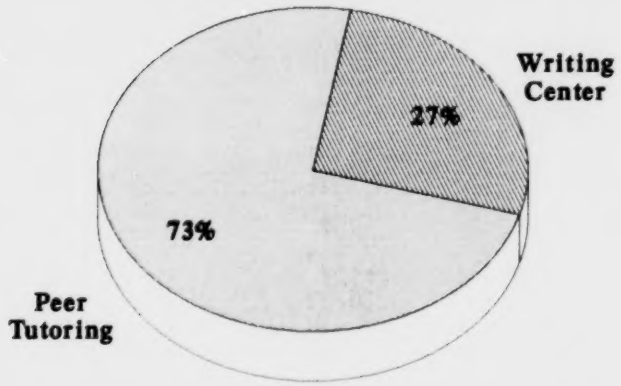
Figure 2

Usage Comparison
Writing Center vs. Peer Tutoring Center

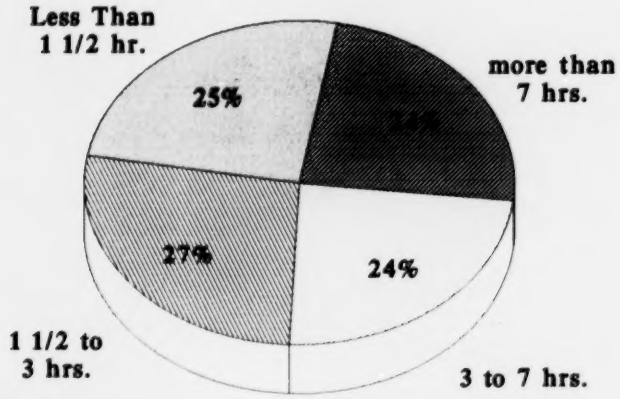


N=33,450 BCLC Visits
Source: BCLC Database System

The data in Figures 3 and 4 suggest that students tended to spend more time at the Peer Tutoring Center than they did at the Writing Center. During the period under study, the average student user spent in excess of eight hours (8.2) at the Peer Tutoring Center while those using the Writing Center averaged slightly more than five-and-one-half hours (5.6) hours of use. It should be noted that usage distributions for these service specific data are, like the overall usage data, somewhat skewed. The median usage hours for the BCLC Writing Center is considerably lower at 3.2 hours than the mean reported above. Likewise, median usage for the Writing Center is less at 3.2 hours. Never-the-less, the differential in preference for the Peer Tutoring Center by virtue

Figure 3

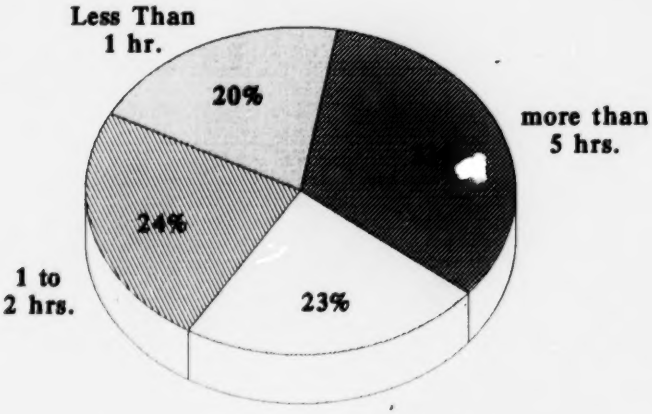
Usage Patterns - Peer Tutoring Center
Duration of Visit



N=4,057 Tutoring Center Users
Source: BCLC Database System

Figure 4

Usage Patterns - Writing Center
Duration of Visit



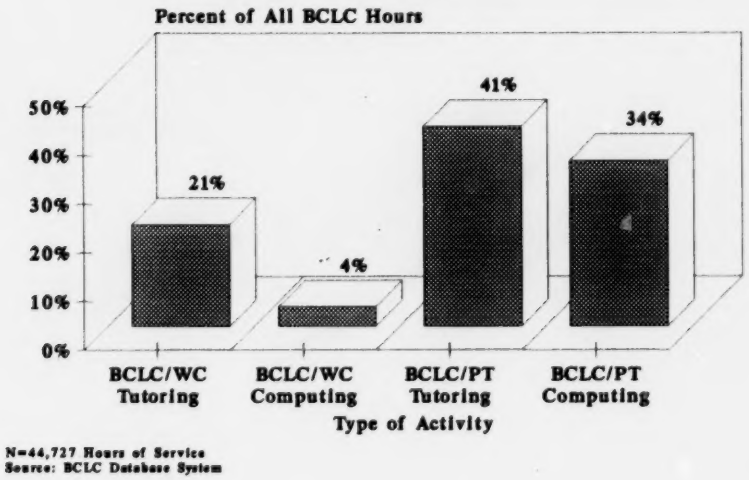
N=2,073 Writing Center Users
Source: BCLC Database System

of frequency and duration of use remains in evidence. It should also be noted however that the length of a single visit to either the BCLC Writing Center or the BCLC Peer Tutoring Center did not vary substantially. A typical visit to the BCLC/WC lasted approximately 1.29 hours, which is only slightly less than the 1.36 hour duration of the typical BCLC/PT visit.

The BCLC logged a total of 44,727 hours of service to the Brooklyn College community during the period under study, and their distribution is depicted in Figure 5. Sixty-two percent of this time was dedicated to tutoring activity with 41 percent occurring

Figure 5

Distribution of BCLC Hours Dedicated to Tutoring and Computing



N=44,727 Hours of Service
Source: BCLC Database System

in the Peer Tutoring Center and 21 percent occurring in the Writing Center. Computer supported learning center activities

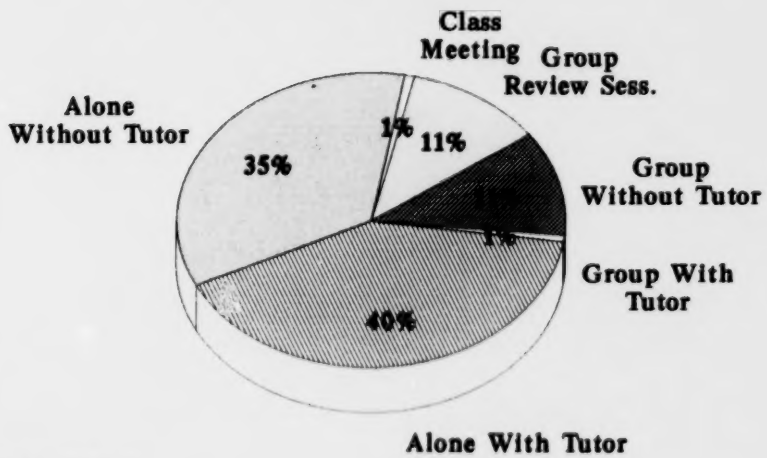
accounted for 38 percent of all facility time, with 4 percent occurring in the Writing Center as compared to 34 percent occurring in the Peer Tutoring Center.

Purpose of Visit

Both the Writing Center and the Peer Tutoring Center exist to provide enrichment and support to students in all curricula at The College. Students may work at the BCLC with or without a tutor in groups or alone. According to data compiled for this evaluation, and presented in Figure 6, students preferred the individualized activities available to them through the BCLC. More than two-thirds (67.8%) of all visits involved individualized use of the

Figure 6

Type of BCLC Activity



N=33,450 BCLC Visits
Source: BCLC Database System

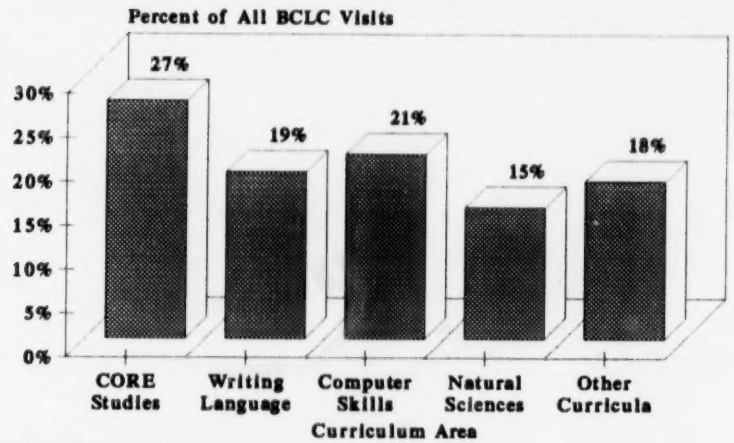
Note: 3.5 % are 'other' activities

facility. Nearly four out of every ten visits (39%) were one on one student and tutor sessions. A nearly equal proportion involved students working alone without a tutor. When combined, group-oriented activities accounted for less than one-fourth of all sessions logged during the time period. Small group work with a tutor and class meetings each accounted for less than one percent of all facility visits respectively. Group review sessions and small group work without a tutor were utilized more heavily, accounting for about 11 percent of all visits. Other activities accounted for the balance of visits to the BCLC (3.5%).

A primary objective of the BCLC project is to facilitate the expeditious completion of the "Core" components of the undergraduate curriculum at Brooklyn College and to enhance students' ability to write and master the technology for the 21st century. Commitment to these objectives is evidenced by the subject matter areas for which the students sought help at the BCLC. According to the data in Figure 7, below, more than one-quarter (27%) of all visits to the BCLC involved support for the Core curriculum. Approximately one-fifth (19%) of all BCLC sessions were aimed at supporting writing, composition and English language development, while yet another one-fifth (20.5%) were targeted to computer skills development. An additional 15 percent of visits were related to instruction in the natural/physical sciences while the remaining appointments were for assorted other curricular concerns.

Figure 7

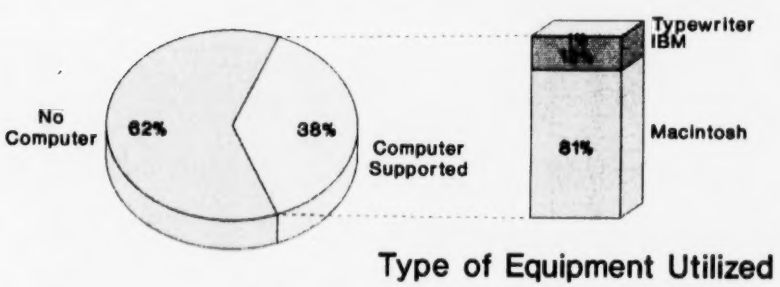
Subject Matter Related To Visit
(Curriculum Area Supported)



N=33,450 BCLC Visits
Source: BCLC Database System

Figure 8

BCLC Computer Utilization



N = 44,727 Hours of Service and 11,628 Machine Assisted Visits
Source: BCLC Database System

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Equipment Usage

More than one-third of all visits to the BCLC (34.5%) involved the use of computer equipment. During the three semesters under study, the BCLC provided service for a total of 44,727 hours. Figure 8 indicates that 38 percent of all BCLC hours were occupied by those individuals using computer equipment. Figure 8 also indicates that the equipment of choice among facility users is the Macintosh machinery. When equipment was used during a visit, the Macintosh line of computers were clearly preferred, accounting for 81 percent of all machine-assisted visits. IBM machines (and compatibles) were used during only 18 percent of student sessions at the BCLC. Typewriters are also available to users, and these were used during less than 1 percent of all BCLC visits.

OUTCOMES ON CORE INDICATORS OF EFFECTIVENESS

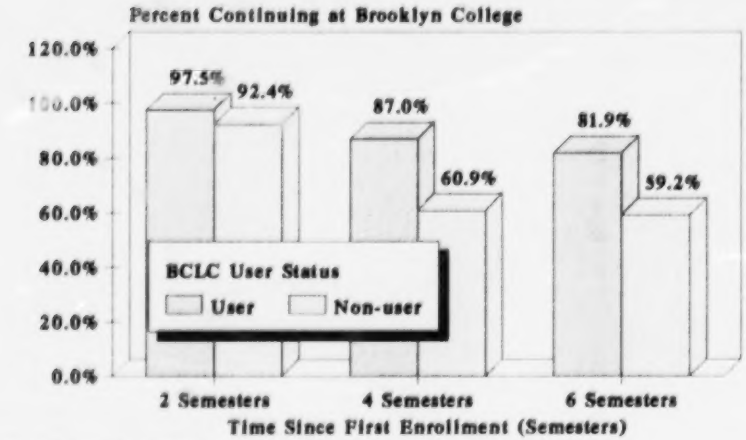
The utilization data presented above establish the fact that the Brooklyn College Learning Center is, by virtue of the numbers of students it engages, an integral part of the College Community. The BCLC was visited by more than 5000 students during the past three semesters. These individuals made 33,450 visits to the center which accrued to a total of 47,250 hours engaged in the academic support and enrichment services the facility affords them.

The analysis of outcomes which follows exploits the capabilities of the newly developed College-wide Integrated Student Database (SDB) and the BCLC Database. These data systems provide a continuously updated longitudinal database that tracks entering student cohorts of interest for each semester of enrollment from entry to exit from the college. Such a longitudinal approach enables research which links outcomes on core indicators of institutional effectiveness with BCLC utilization data in order to explore the benefits of BCLC participation. Outcomes for three cohorts of freshmen students entering the College for the first-time are compared on several indicators of retention, rate of pursuit toward degree, and academic performance. Outcomes on these dimensions of effectiveness are compared for students from among these cohorts who used the BCLC since entering the college and those who did not use the facility.

Retention

BCLC users are retained at rates appreciably higher than non-users after only two semesters of enrollment at the college. Differences in retention rates become even more pronounced over time. Figure 9 illustrates the positive near term and long term retention trends associated with BCLC participation. After one year (two semesters) of enrollment at the College, 2.5 percent of the BCLC user group were no longer in attendance while nearly 9 percent of their non-user counterparts had exited the college. Differences in retention for the user and non-user groups are most

Figure 9
Retention Of BCLC Users vs. Non-Users
Fall 1990 through Spring 1993



N=4,465 Brooklyn College Students
Source: BCLC Database System & Brooklyn

pronounced after two years of enrollment. Students who did not use the BCLC are 25 percent less likely to continue at the college (60.9%) than those who did use the facility (87.0%). The trend is sustained after three years of attendance with 81.9 percent of BCLC users continuing to enroll at the college, a rate that is nearly 23 percent higher than that of non-users.

At this juncture, the newly developed databases (SDB and BCLC/DB) can provide outcomes data for only three years of attendance as it relates to facility utilization. It is therefore impossible to report degree completion rates which are arguably the ultimate indicator of success for the BCLC. Typically, cohort tracking efforts allow for 150 percent of normal time to graduation in

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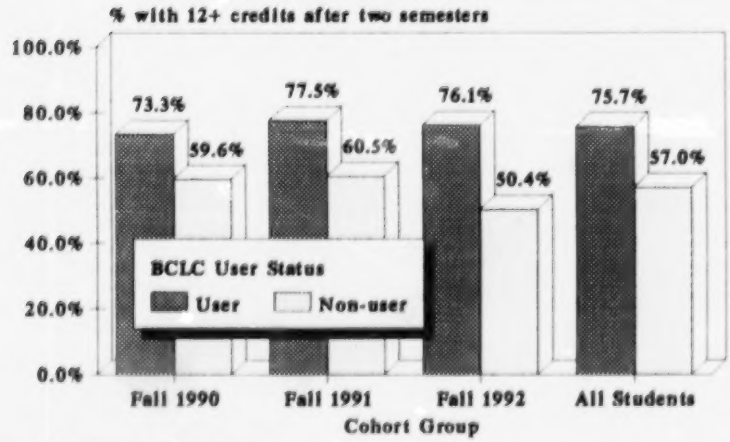
order to examine the rate at which students complete the academic task. Spring of 1994 represents 100 percent of normal time to graduation and tracking/reporting on this critical outcome measure will commence at that time.

Transition From Lower to Upper Freshman Status

A key problem confronting the College at the time the Title III grant was initiated was the inability of students to expeditiously complete the credits necessary for ascendancy to upper freshman status at the college. Figure 10 compares BCLC users and non-

Figure 10
Transition From Lower to Upper Freshman
Percent Exceeding the 12 Credit Barrier



N=4,461 Brooklyn College Students
Source: BCLC Database System & Brooklyn

users in the three cohorts individually, and in the aggregate, in

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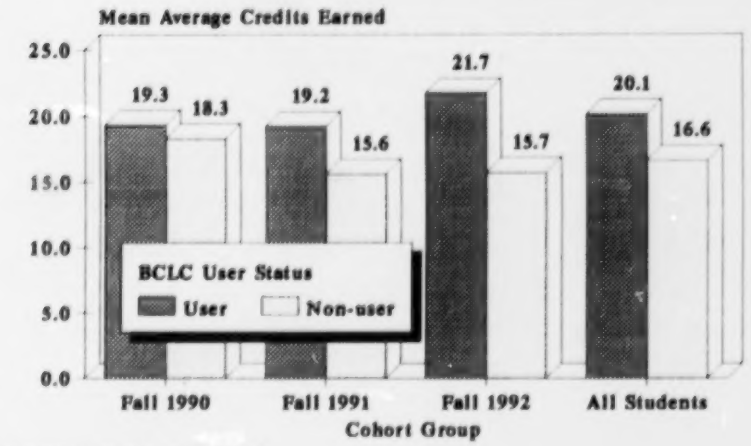
order to assess their ability to overcome the twelve credit barrier. BCLC users pursued the twelve credit milestone and exceeded it at rates consistently higher than non-users. Overall, students who did not use the BCLC were 20 percent less likely to surpass the twelve credits necessary for upper freshman status in their second semester of attendance.

Rate of Pursuit and Academic Performance

Further evidence linking BCLC utilization with expedited progress toward the Baccalaureate degree is provided by Figure 11, Figure 12, and Figure 14. An examination of the data in Figure 11 shows

Figure 11

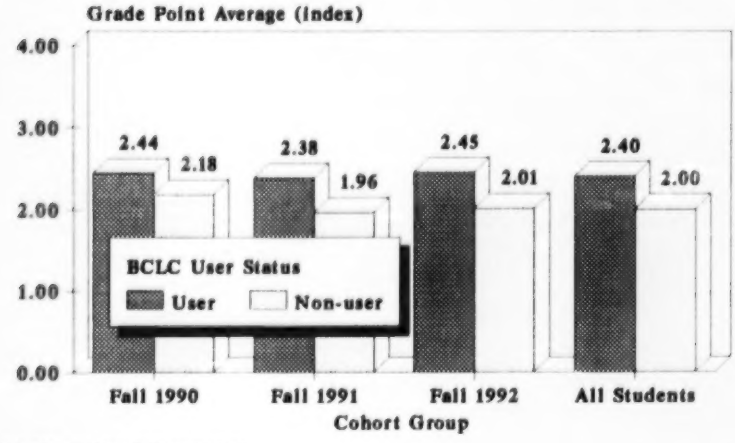
Average Number of Credits Earned
After Two Semesters In Attendance



N=4,461 Brooklyn College Students
Source: BCLC Database System & Brooklyn

Figure 12

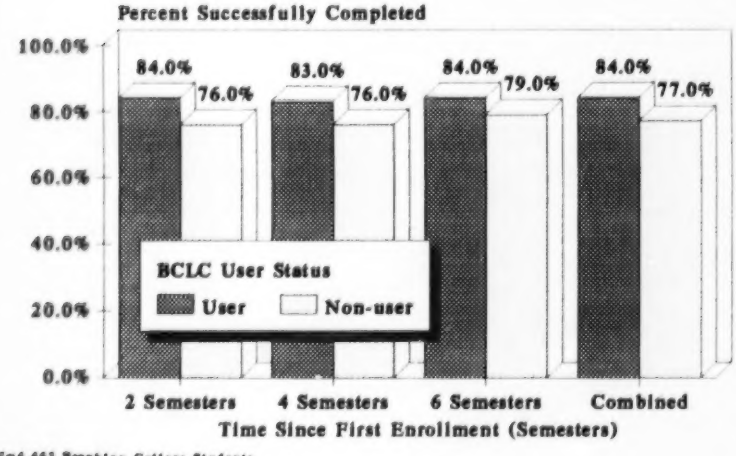
Grade Point Index Earned
After Two Semesters In Attendance



N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

Figure 14

Attempted Credits vs. Completed Credits
Percent That Are Successfully Completed



N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

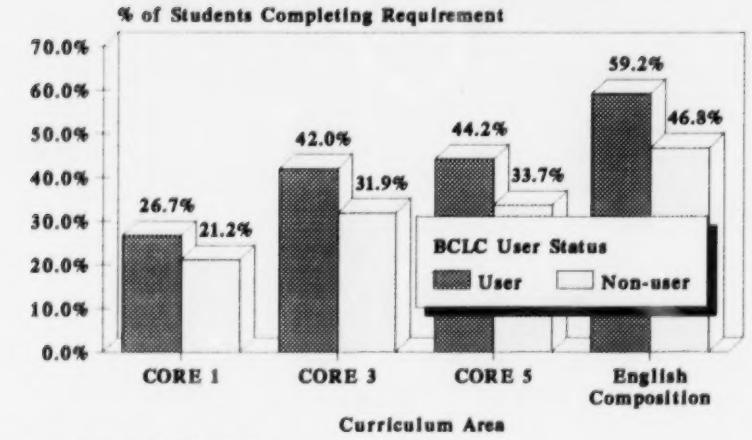
that, on average, BCLC users earned three and one-half credits more than non-users. Additionally, they do so more efficiently than their non-user counterparts. Figure 14 provides compelling evidence that students who use the BCLC successfully complete a higher percentage of the credits they attempt than those who do not use the Center. BCLC users completed 84 percent of the credits they attempted as opposed to 77 percent completed by the non-user group.

The evidence further suggests that BCLC users not only pursue their degrees more efficiently than non-users, it also indicates that they do so at a superior level of academic performance. This is evident from Figure 12, which shows that, after two semesters, BCLC users obtained an overall grade point index that is nearly one-half of a grade point higher at 2.40 than non-users, who earned a combined grade point average of 2.00.

Basic Skills Proficiency and Success in Subsequent Related Coursework

At the heart of the Learning Center initiative was support for the College's general education requirements, which are embodied in the CORE components of the curriculum; support for students struggling with written English; and finally, addressing the needs of underprepared students who are at risk because they are slow to be integrated into the mainstream curriculum at the college.

Figure 13
CORE Studies & English Language Studies
Attainment After Two Semesters

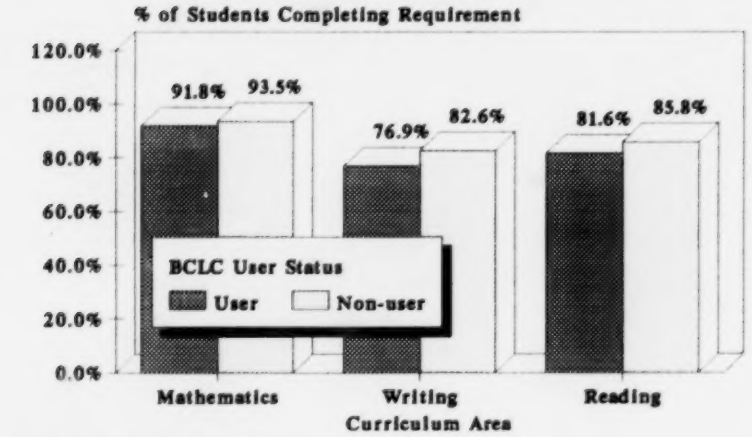


N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

Analysis of near term information (2 semesters) presented in Figures 13 and 15 reflect favorably on the Learning Center's commitment to progress in these areas. Figure 13, which documents progress in the CORE curriculum, suggests that students who do not use the BCLC complete their CORE curriculum requirements at much lower rates than those who do use the facility. A substantial difference is evident in the CORE 3 and CORE 5 areas as well as the English Composition component of the curriculum with users demonstrating a 10% to 12% greater likelihood of completing these requirements than non-users.

Evidence of success in the remedial components of the curriculum is in evidence from Figure 15. After two semesters, BCLC users who, according to the statistics in Table 2, were less well

Figure 15
Proficiency In The Basic Academic Skills
Completion Rates After Two Semesters



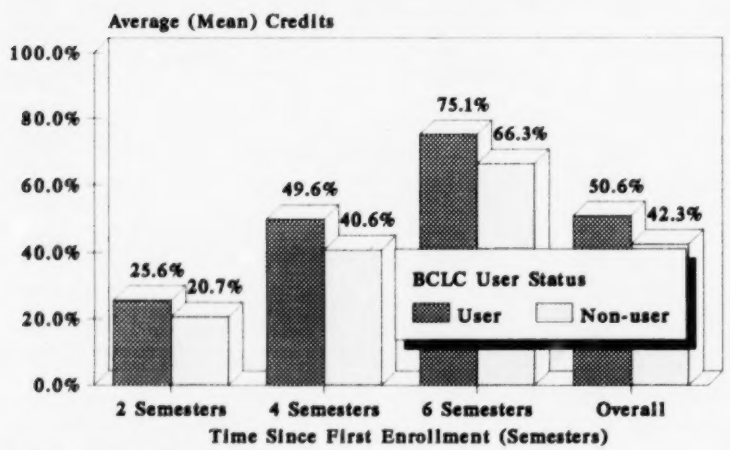
N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

prepared, showed substantial progress in completing their Basic Skills Proficiency Tests. BCLC users attained substantially improved pass rates in the remedial mathematics area of nearly 92 percent. This figure represents an improvement of nearly 15 percent from the initial passing rate and it is only 1.7 percent lower than the non-user figure. Differences between facility users and non-users were somewhat more pronounced with regard to reading and writing proficiency tests. Users passed the writing proficiency tests at a rate of nearly 77 percent, which is almost six percent lower than that of the non-user group. Similarly, non-users earned certification of minimal reading proficiency at a rate that is approximately 4 percent higher than users after two semesters.

Long-term Outcomes

Entering freshmen cohorts were tracked through the spring 1993 semester in conjunction with the summative domain portion of this evaluation project. Based on the data compiled in Figure 14 and Figures 16 through 20, the BCLC has achieved a high level of success, as measured by the outcomes criteria defined above. Students who use the BCLC are retained at much higher rates than

Figure 16
Average Number of Credits Attempted
Fall 1990 through Spring 1993

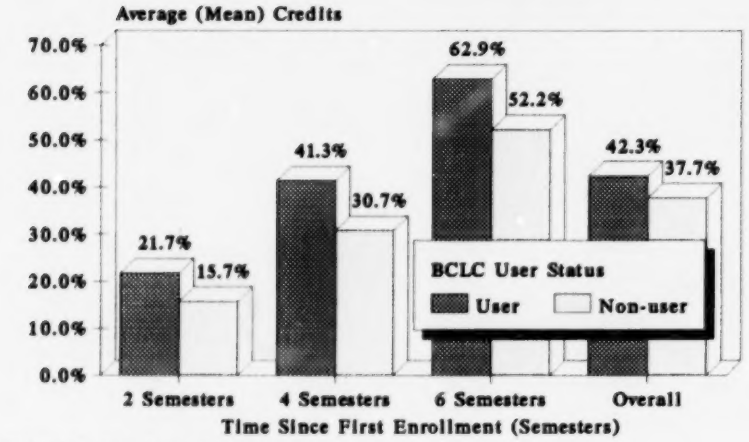


N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

non-users. Users attempt more credits, earn more credits, and achieve a ratio of successful credit completion that is consistently higher than the non-users. Moreover, BCLC users do

Figure 17

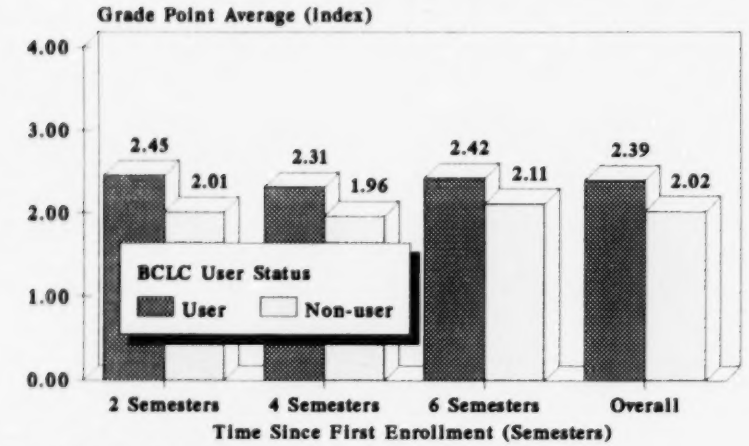
Average Number of Credits Earned
Fall 1990 through Spring 1993



N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

Figure 18

Grade Point Index
Fall 1990 through Spring 1993

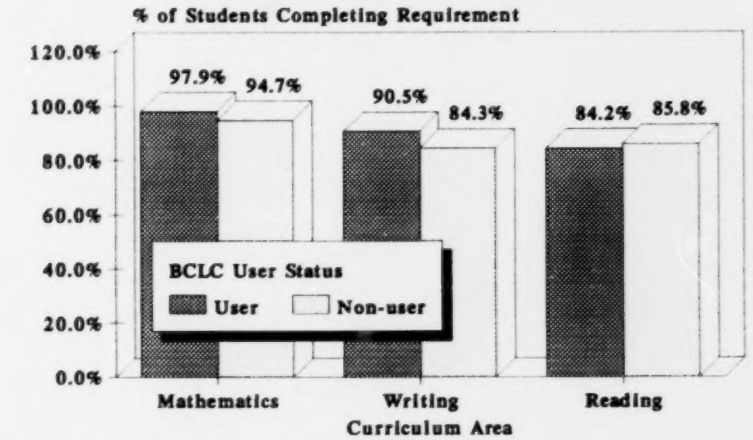


N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

so at a generally higher level of academic performance as measured by grade point index, than non-users.

Substantial gains were realized by BCLC users in the area of Basic Academic Skill Proficiency as well. According to the data in Figure 19, after six semesters, users surpassed non-users in passing the mathematics and writing proficiency tests and achieved a pass rate that is nearly equivalent in the reading area.

Figure 19
Proficiency In The Basic Academic Skills
Completion Rates After Six Semesters

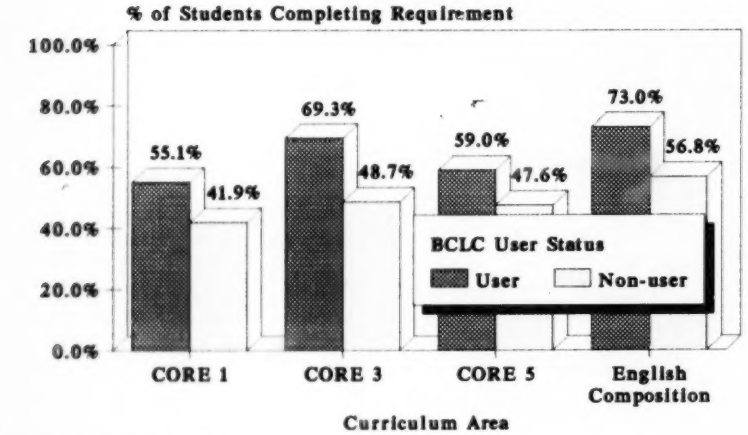


N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

Finally, with regard to related coursework, the completion rates summarized in Figure 20 indicate that users sustained uniformly higher rates of CORE requirement completion, and writing

Figure 20

CORE Studies & English Language Studies
Attainment After Six Semesters



N=4,463 Brooklyn College Students
Source: BCLC Database System & Brooklyn

proficiency than their non-user counterparts. After six semesters of enrollment, BCLC users passed CORE 1, CORE 3 and CORE 5 at rates that are consistently higher than those for non-users. Users also passed English composition at a rate that is 26 percent higher than those who do not use the facility.

The Affective Domain: Perceptions of Students, Faculty and BCLC Staff

In a sense, the entire Brooklyn College community represents the clients of the Brooklyn College Learning Center. Many different individuals, groups, and organizations come in contact with the

Learning Center during the academic year. In order to determine the extent to which this diverse array of clients are involved and satisfied with the programs, services and activities offered by the Learning Center, multiple surveys were carried out with different constituencies having different relationships to the Center. All data were collected by means of self-administered questionnaires.

The following six surveys comprise research efforts dealing with the affective domain:

1. **In-Class Questionnaire of Brooklyn College Students**

   This instrument was administered to students throughout the campus with the intent of learning about usage patterns and perceptions of both those students who use the facility and those who do not. Data were collected from a total of 751 respondents.

2. **Peer Tutoring Center Student Questionnaire**

   This survey was completed by actual users of the facility while in the facility. The purpose of this research was to evaluate student perceptions of the services, the staff and the equipment and environment of the facility. Data were collected from a total of 121 students.

3. **Writing Center Student Questionnaire**

This survey was completed by actual users of the facility while in the facility. The purpose was the same as above for the Peer Tutoring Center. Data were collected from a total of 36 students.

4. **Faculty Questionnaire**

Distributed to Brooklyn College faculty campus-wide. The research was intended to explore usage/referral patterns, faculty perceptions of the facility and to obtain suggestions for improving the Brooklyn College learning center. Data were collected from a total of 142 faculty.

5. **BCLC Tutor Questionnaire**

Distributed to students working as tutors in either the Writing Center or the Peer Tutoring Center. The research was intended to examine tutor's perceptions of the Learning Center, understand the work from their point of view and to learn their opinions regarding improvement. Data were collected from a total of 54 tutors.

6. **Computer and Word Processing Questionnaire**

Distributed to students in order to assess levels of need and

preferences with regard to computer training, support, software acquisition, and machine preferences. Data were collected from a total of 358 students.

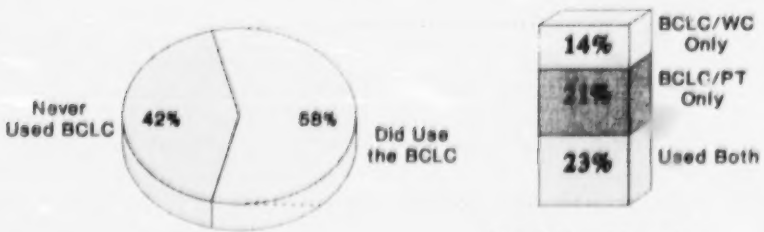
Findings

Based on the college-wide survey of students, which was administered in class, more than one-half of all respondents (58%) indicated that they had used either the BCLC Writing Center or the BCLC Peer Tutoring Center. Twenty-three percent reported using both components of the learning center while 14 percent indicated they used only the Writing Center and 21 percent used only the Peer Tutoring Center. These findings, which are illustrated in Figure 21 below, are consistent with the high number of users documented by means of the BCLC Database. Forty-seven percent indicated that they had used the Writing Center at least once as compared with 34 percent who indicated using the Peer Tutoring Center at least once.

Reasons for not using the Learning Center were, by and large, unrelated to characteristics of the Learning Center or the quality of services and programs at the Center. Instead, non-participation reflected the personal disposition of respondents. Four out of ten non-users did not utilize the Learning Center because they did not feel they needed help. Another 31 percent

Figure 21

In-Class Survey of Students



BCLC Utilization Patterns

Facility Used

N = 675 Respondents

Source: Brooklyn College Learning Center

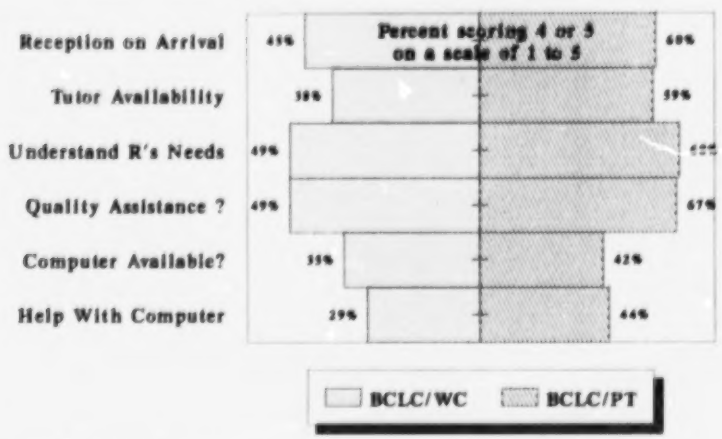
did not use the BCLC because they did not have the time. Less than 1 percent of respondents mentioned undesirable characteristics of the Center as reasons for non-use.

The courses for which those respondents who did use the Learning Center were most likely to obtain tutoring are, in descending order, English 1 (40%), Core 1 (22%), Core 3 (21%), English 0.4 (18%), Core 5 (16%), English 2 (13%), and other courses (14%). All remaining courses received mer ons totalling less than 10 percent of all courses. Slightly more than one-third (35%) of all respondents who used the facility indicated that they obtained tutoring more than five times in a single semester.

The quality of Learning Center experiences was generally rated higher for the Peer Tutoring Component of the Center than for the Writing Center component. Top two box favorable ratings were obtained for aspects such as the user's reception at the facility upon arrival; the availability of tutors; the tutors understanding of the user's difficulty, the quality of the tutor's assistance; the availability of computers and finally, help with computers. These results are illustrated in Figure 22 which follows. Ratings of tutors were fairly high for the Writing Center with nearly a

Figure 22

In-Class Survey of Students
Top 2 Box Experience Ratings



N = 675 Survey Respondents
Source: Brooklyn College Learning Center

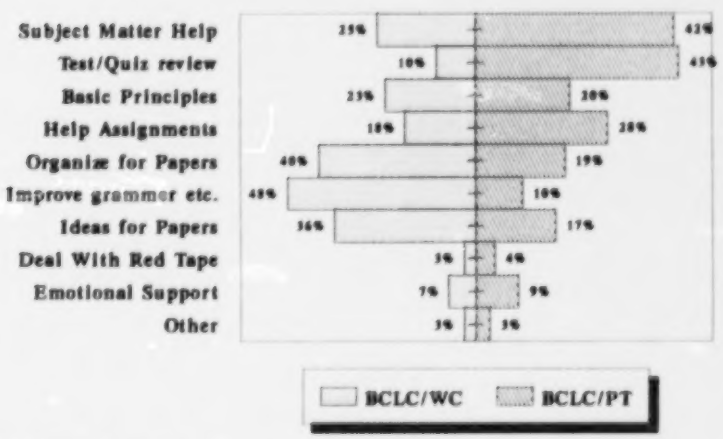
fifty percent top two box rating while nearly seven out of ten Peer Tutoring Center users gave such ratings to the tutors. A substantial discrepancy exists between the two components of the

Learning Center with regard to tutor availability. Fewer than four in ten Writing Center users expressed very favorable feelings about tutor availability.

Reasons for enlisting the help of tutors in the Writing Center and the Peer Tutoring Center are compared in Figure 23. Not surprisingly, those areas directly related to writing received the largest proportion of mentions among Writing Center users. Improving grammar, spelling, etc., was mentioned most often at 48 percent, followed closely by organizing material for papers (40%)

Figure 23

In-Class Survey of Students
Type of Help From Tutor Summary



N = 675 Survey Respondents
Source: Brooklyn College Learning Center

and developing ideas for papers. By way of comparison, Peer Tutoring Center users were most frequently there for assistance in

understanding subject matter (42%) and to review for tests and quizzes.

Overall, facility users exhibit very positive feelings about the peer tutoring experience with 87 percent saying they would recommend it to their friends. When probed, the most frequent reason students would do so is because it is "helpful." The fact that the tutors are "nice and understanding" was foremost among the factors mentioned (23%) by facility users when asked what they like about peer tutoring. "It's helpful" was also mentioned frequently (20%) as was their liking for the one-to-one nature of the tutoring experience.

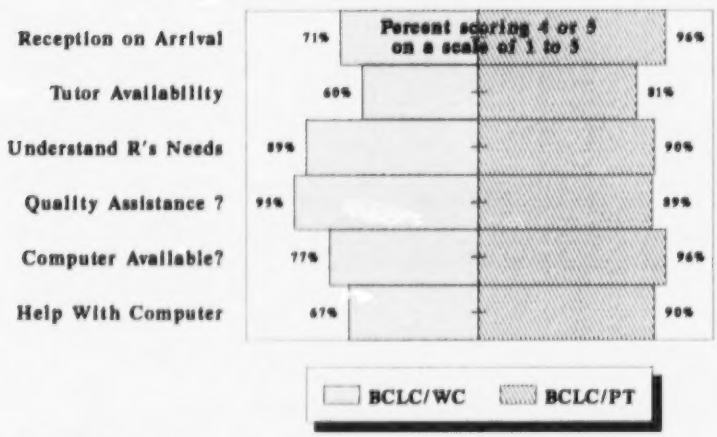
When asked how the facility could be improved to better serve student needs, responses generally reflected a desire for more of the same. More than one-third (34%) requested more tutors while another 10 percent expressed a desire for more flexible hours and 13 percent indicated that the facility is fine as it is. While relatively infrequent, negative mentions included complaints about the environment, i.e., rooms too small, too crowded, too few computers, subjects, tutors, etc. Two respondents did indicate unhappiness with their tutor and asked that the facility get "nicer" tutors.

In addition to the In-Class Survey, BCLC users completed surveys on a periodic basis within the Peer Tutoring and Writing Centers. Overall, users of both the Writing Center and the Peer Tutoring

Center regard the two programs extremely favorably. Ninety-seven percent of Writing Center survey respondents said they would recommend the Writing Center to a friend while 99 percent of Peer Tutoring Center respondents would do so. Seventy percent of Writing Center respondents indicated that they had come for tutoring more than five times during the semester. This figure is only slightly lower than the 59 percent of Peer Tutoring respondents who sought tutoring more than five times in a single semester.

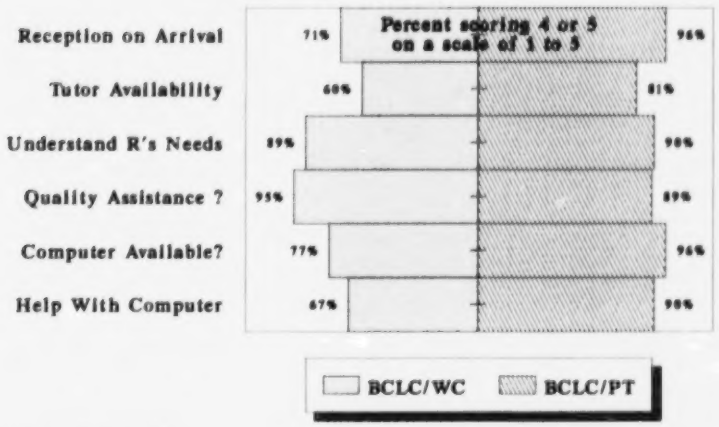
Although responses are on an order of magnitude that is generally higher than the In-class Survey, Figures 24 and 25 indicated that students from both the BCLC/WC and the BCLC/PT regard their experiences very favorably. Especially gratifying are the high

Figure 24
In-Learning Center Survey of Students
Top 2 Box Experience Ratings



N = 157 Survey Respondents
Source: Brooklyn College Learning Center

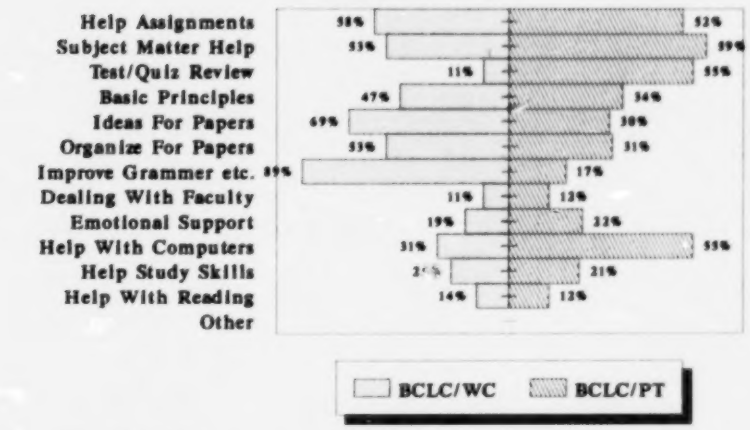
Figure 24
In-Learning Center Survey of Students
Top 2 Box Experience Ratings



N = 157 Survey Respondents
Source: Brooklyn College Learning Center

marks tutors receive from users of both facilities for the quality of their assistance and their understanding of students' difficulties and problems. Nine out of ten users of both facilities regarded tutors in this positive manner. These positive evaluations carry over into the open-ended questions where more than one-half of users indicate that they like the Learning Center because the tutors are knowledgeable. A trend that does merit some attention is students' tendency to rate the

Figure 25
In-Learning Center Survey of Students
Type of Help From Tutor Summary



N = 157 Survey Respondents
Source: Brooklyn College Learning Center

Writing Center lower than the Peer Tutoring Center with regard to the availability of tutors and the availability of computers. By and large, results from these instruments were somewhat more positive than those collected on a campus-wide basis.

English was the course most frequently mentioned as the reason for tutoring among Writing Center users (47%). Among Peer Tutoring Center Users, more than one-third of students (37%) indicated that they had come for tutoring in multiple courses. Another 22 percent sought tutoring for CORE 5 followed closely by Chemistry at 18 percent.

Faculty too are very much inclined to take advantage of the support and enrichment services provided by the Brooklyn College

Learning Center. However, based on the findings from the Faculty Survey, they do exhibit a marked preference for the support services available in the Writing Center. More than eight out of ten faculty surveyed (81%) affirmed that they referred students to the Writing Center for help. By contrast, less than one-half of those faculty surveyed (46%) referred students for Peer Tutoring. Regardless of which facility faculty referred students to, more than three out of four faculty (76%) had referred students who appeared to be in need of help. Similarly, nearly two-thirds said that they refer failing students and students who request help to tutors. Consistent with the preference for the Writing Center already noted, faculty referrals for tutoring were most often for the purpose of improving grammar and spelling (75%) or organizing materials for papers (57%).

Responses to open-ended questions by faculty are very supportive of the Learning Center's mission. Fifty-three percent of those answering felt that tutoring services have improved the quality and completion rate of schoolwork assigned to students. Suggestions for improvement all focused on expanding the capacity of the Learning Center with more hours, more tutors, improved publicity and outreach to the College Community.

Data from the Tutor Questionnaire provide compelling evidence to suggest that the benefits of Tutoring work both ways. Tutors from both the Writing and Peer Tutoring Centers were surveyed regarding their experiences in the Learning Center. Nearly all tutors would

recommend the experience to a friend (96%). The vast majority of tutors (96%) felt they received adequate support from the Center when they started tutoring. Most (92%) also felt their tutoring skills had improved since they started. And finally, nearly all (98%) feel that they help students with what they do.

Many tutors also indicated substantial personal gains from the experience. More than one-fourth of tutors felt the experience improved their own schoolwork and study habits. A similar proportion (24%), indicated that tutoring improved their interpersonal skills and taught them to be more patient when dealing with others. Smaller proportions (roughly 16%) also felt they became more self confident by virtue of the experience and the same number indicated that the experience inspired them to pursue teaching as a career.

CONCLUSION

The singular mission of the Brooklyn College Learning Center was to provide the College Community with a facility that would enhance the success of its students as they pursue their Baccalaureate degrees. At this juncture, all of the programs and services which constitute the BCLC are in place, the data systems necessary to support its activities and track its effectiveness over time are also operational. And finally, after several frustrating delays, the actual state-of-the-art Brooklyn College

Learning Center is open. The new facility marshalls together all the dedicated staff and personnel who in the face of adversity managed to succeed remarkably well in realizing the mission of the Learning Center initiative. Based on the evidence presented above, even without the central place to carry out the myriad activities of the Brooklyn College Learning Center, the Learning Center programs have succeeded remarkably well in their mission.

First of all, even without the advantage of a high profile location, the BCLC managed to be an integral part of the College community with nearly 5200 students visiting the facility. Facility users logged a total of 33,450 visits to the facility, which accrued to a total of 47,250 hours engaged in the academic support and enrichment services the facility affords them.

To all indications, these were hours well spent. When students who used the BCLC were compared with those who did not, BCLC users are found to be retained at much higher rates than their non-user counterparts. BCLC users also attempt greater numbers of credits and complete them more efficiently. The ratio of credits successfully completed to credits attempted was found to be greater for BCLC users. Additionally, the facility users earned grade point averages superior to their non-user counterparts.

The BCLC was successful in supporting students who enter College without the requisite proficiencies in reading, writing and

mathematics. BCLC users were found to be generally less well prepared for college level work than the non-users. Yet, after three years of enrollment, the BCLC users completed their minimum proficiencies at rates higher than the non-users. Additionally, the user group fulfilled the subsequent CORE curriculum requirements at substantially higher rates than their non-user counterparts.

Finally, based on the surveys completed by faculty, students and BCLC staff alike, the BCLC facility was found to be a place where academic peers can foster a sense of community and work together for success at the academic task.

Given the data at hand, one can only conclude that the BCLC has more than adequately accomplished its mission to date. With the opening of the new centralized facility, and additional research, it is reasonable to expect even more noteworthy accomplishments from this innovative learner centered initiative.